

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

Claims 1-23 (canceled)

24. (Currently amended) A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid ~~silicon~~silicone rubber and carbon black at a weight rate in a range of 100:1~15 into a particular shape and curing a mixture,

wherein the carbon flexible heating structure has the shape of a mesh, and

wherein the mesh is a fabric made of a woof and a warp and has port portions formed longer than the woof or the warp of the fabric, and the port portions are formed of a conductive metal wire having superior conductivity.

25. (Previously presented) The carbon flexible heating structure of claim 24, wherein the port portions are tin-plated copper wires or silver wires.

Claims 26 - 28 (canceled)

29. (Currently amended) A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid ~~silicon~~silicone rubber and graphite powder at a weight rate in a range of 100:10-150 into a particular shape and curing a mixture, wherein the carbon flexible heating structure has the shape of a mesh, and wherein the mesh is a fabric made of a woof and a warp and has port portions formed longer than the woof or the warp of the fabric, and the port portions are formed of a conductive metal wire having superior conductivity.

30. (Previously presented) The carbon flexible heating structure of claim 29, wherein the port portions are tin-plated copper wires or silver wires.

31. (Currently amended) A carbon flexible heating structure formed by molding a conductive composition obtained by mixing liquid ~~silicon~~silicone rubber and graphite powder at a weight rate in a range of 100:10-150 into a particular shape and curing a mixture, wherein insulation coating formed of an insulating mixture obtained by mixing liquid ~~silicon~~silicone rubber and a diluent and agitating a mixture is provided on a surface of the carbon flexible heating structure.